



6-22-05

Ifw

Appn. Number 10/643373

Appn. Filed 8/20/03

Applicant Craig Holloway

Title S.T.F.P.

Examine/GAU Jwoodrow Eldred/3644

6120105



Appn#10/643,373 (Holloway) AU 3644 1of16
General Response;

Stiennon, although brilliant, only covers simultaneous, and what applicant refers to as simultaneous by vector (not simultaneous explosions yet simultaneous arrival of energy to the target) processes, and these only in a limited way. It is limited by;

- (A) It is "to destroy aerial targets."
- (B) It is "a fixed defensive weapon for infantry and installations."
- (C) It utilizes the energy of a pressure wave travelling at or slightly faster than the speed of sound.
"the blast wave travels at the speed of sound or slightly in excess thereof"
- (D) It has to interface through "a blasting machine alone, or a blasting machine in connection with time delay blasting caps or delays attached to detonating cord."

My process is not limited to aerial targets, nor is it limited as a fixed defensive weapon, nor is it limited to the energy of an air pressure wave travelling at approximately the speed of sound, nor does it need the blasting machine connection.

Woodall's Barge Strike Explosive Clearance System is a limited simultaneous detonations system.

Earlier art, such as the Japanese antiaircraft guns that fired a radar or timed fuse are a limited simultaneous detonation.

None of the above -even on the level of simultaneous detonation- cover shaped charge technology-for instance the Japanese guns firing many simultaneously detonating antiaircraft shells in a cone pattern-or The Strike Barge system barges coming in on the water surface in a two dimensional triangular pattern or being sunk in a three dimensional cone pattern.

None of the above cover more subtle synchronous event energies available -for instance if we took the explosive ordnance in figure 17 and moved it to the right or the left and focused the forces on the corners it would tend to spin the target in a clockwise or counterclockwise fashion, depending on which corners the energy was focused- or if in figure 6 the "B" bombs were moved to underneath the right end of the target, and the "A" bombs moved to the top left of the target-this putting an upending or flipping force on the target.

None of the above take advantage of the nuances available by using explosives of different expansion rates-to be differentiated from the definition of

detonation rates-defining detonation rate as the speed with which the detonating wave moves through the explosive material and defining expansion rate as the rate of expansion of the gases released from a detonation of explosive material or the exploding of explosive material-that is if the if the exploding wave passes through the unexploded material at less than the speed of sound. Although many times expansion rates will correlate with detonation rates they do not necessarily do so.

Simultaneous By Vector
Simultaneous (or synchronous) by vector is covered by Stiennon in a limited manner. Applicant's process is not limited to aerial targets, nor is it limited as a fixed defensive weapon nor is it limited to an air pressure wave travelling at approximately the speed of sound, nor does it need the blasting machine connection.

Synergetic Events That Are Not Covered By Simultaneous Or
Simultaneous By Vector

Ideally each target would have it's own synergetic event process designed specifically for that target-this would theoretically lead to as many different specific sequences and spacings of the different ordnances as there are targets to attack.

There are however some specific processes I would like to claim.

Bouncing Procedure; The difference between this and Synchronous By Vector is that this would be a series of explosions timed so that the pressure wave from the explosion reaches the target at the time it is returning to it's original position and is moving in the same direction as the pressure wave. In a manner similar to pushing a child on a swing-if we push at the right time we increase the swings motion , if we push at the wrong time we decrease the motion. We could also push the swing with two people on opposite sides-each pushing the swing as it moved away from them as it returns towards it's former position; If we take figure 9 and we calculate the time it would take for an explosion to occur on the surface, the pressure wave to travel to the target, the target to react away from the pressure wave, the target rebounding back through it's original position and to a position closer to the surface and then to start back down away from the surface to it's original position and call this time "X" then the bombs would go off at 0 seconds, $0+X$ seconds, $0+2X$ seconds, $0+3X$ seconds, etc. If the cycle time (the time it takes the target to react away from the explosion, back through it's original position and to it's closest position relative to the surface) changes then the formula would change to 0 seconds, $0+X$ seconds, $0+2X+Z$ seconds (where Z is the change in cycle time). If we look at figs. 6, 7 and 8, this demonstrates a two sided pushing or bouncing-

the difference would be that it would be based on a half cycle of motion-as the target returns to it's original position for the first time the second explosion, in the opposite direction impacts. This, continued from both sides until the desired level of motion is achieved.

Resonance Procedure;

This would also be a rhythmic sequence but instead of putting the whole target in motion relative to it's surroundings it would be to create an internal motion in the target-sound, heat, etc. The difference in timing the explosions would be calculated to have the explosive force reach the target as it is rebounding in the direction towards the pressure wave.

This is exactly opposite of the Bouncing Procedure in that the pressure wave would be calculated to impact the target as it is moving toward the pressure wave, whereas Bouncing Procedure the pressure wave is calculated to hit as target is moving away. As a real life demonstration of the rhythmic processes of Bouncing Procedure and Resonance Procedure, note that soldiers break cadence when they cross a bridge.

Expanding and Collapsing Fields

This concept in my patent application was covered under "rolling detonation", however since "rolling" could be grouped with Synchronous By Vector applicant should like to distinguish them. Both expanding and collapsing fields start with a grouping of STFP ordnance(this could be 2 or 3 dimensional) with

ordnance set on 2 or more times. In the expanding field the center bombs go off first, then in order, 1st perimeter (closest to the center) 2nd perimeter, 3rd etc. with outer perimeter going off last. The collapsing field would be the outer perimeter first, next outer perimeter next, and so on until the center ordnance goes off last. These can produce effects not envisioned by Stiennon that is concentrating the energies at the center or concentrating them at the perimeter—further the collapsing field encapsulates the energies providing defilade to those things outside the field. So, for instance if anti aircraft guns fired a plurality of ordnance into a sphere pattern around a target and then collapsed the field, that is, outer perimeter first, next to outer perimeter second and so on until the center grouping of explosives goes off last. This would be an example of a system for attacking aircraft, using an air pressure wave travelling at or slightly faster than the speed of sound, just like Stiennon, yet is a totally enhanced concept. This is also an enhanced and new potential than previous art such as the World War 2 Japanese guns that fired a salvo of shells for a simultaneous detonation. The same type of collapsing field could be applied to a depth charge or torpedo attack—clearly more than the Barge Strike synchronous detonation system. Further more the barge system uses

a specific ordnance-a barge filled with explosives- it is not envisioned as a torpedo attack or a depth charge attack.

In shallow water the effects can be further enhanced by including suitable airburst rounds-such as a fuel air explosive to increase airpressure over the water at the approximate time the underwater attack is occurring.

Stiennon, and earlier art, other than the limited synchronous and synchronous by vector applications, cover no synergetic events. Further they use only a pressure wave (and incident shrapnel but this does play a major role in synergetic events obtained), they do not address energies, such as visible and invisible light, heat and Redox agents acting in concert.

Redox And Other Chemical Agents

The word Redox agent would solve the problem of covering oxidation ^{and reduction} with one word however this does not cover the full concept of applicant's system. An example would be figure 19, if in the blast coming from behind enemy lines included incendiary ordnance and it was desired to protect your troops from fire as well as the pressure wave one could include a fire retarding agent in ordnance of A, B, and C. Another example would be if it was desired to heat, pressurize and oxidise a certain part of a target and only heat and pressurize another part of the same target. In the area of the target one didn't want oxidized one could add a noble or inert gas to the STFP ordnance

in front of the area one wanted to protect so that there was a Redox reaction with the general target and just heat and pressure at the protected site. Noble gases and fire retardant compounds even in a broad definition can not really be called a Redox agent. "Chemical agent" would perhaps work.

As an interesting side note the enemy plane in Stiennon's example could if it deployed quick enough, defilade itself against the pressure wave with it's own STFP airburst formations, breaking up the solid hit of the shock wave, or expanding in time and space the change of pressures/motions to be experienced.

Another feature with applicants system is that it can be programed to attack the atmosphere impeding breathing for troops and vehicles. This is from the larger amount of waste gasses from the explosives as well as the binding of oxygen with other atoms or molecules rendering it less breathable or combustable-this can be done using reducers, incendiaries and high explosives. The larger ordnance concentration afforded by STFP makes a recovery time to breathable levels longer.

Specific Remarks

1; In regards to, " In claim 1, bombs, artillery shells alternative and indefinite." Applicant feels "bombs" in its! broadest sense would suffice.

2. "In claims 2 and 4 "triangular conical, circular or other geometric pattern is alternative and indefinite." Applicant requests separate claims for "triangular" and circular."

3. In claims 3 and 14 " bombs artillery shells alternative and indefinite." Applicant requests change to "bombs"

4. "In claim 3 "synergeticly" is vague and indefinite since it is not clear what the limits of the claimed protection are being defined by this term." Applicant requests examiner to rewrite claims to cover Drill and Wipe Procedure, Bouncing Procedure, Resonance Procedure, Expanding Fields, Collapsing fields, The Simultaneous By Vector situations not covered by Stiennon-that is (A) "to destroy arial targets" (B) a "fixed weapon for infantry and installations" (C)"the blast wave travels at the speed of sound or slightly in excess thereof" (D) a blasting machine alone, or a blasting machine in connection with time delay blasting caps or delays attached to detonating cord", Rolling Technique not covered by Stiennon (I.E. A,B,C, and D above, also defilade available through this technique not covered by Stiennon, all the above covered under general remarks, specific remarks, or original patent application.

5. "In claim 5 "rolling detonation" is vague and indefinite as to the particular process limits implied by this term." Applicant would define "rolling detonation" as follows; A placing of STFP bombs in a direct line and the detonation times set in the following form; 0 seconds 0+X seconds 0+Y seconds where X is the time it takes for the desired energy from the

first bomb in line to reach the second bomb and Y the time it takes for the desired energy from the second bomb to reach the third (the desired energy being defined as the energy desired whether that be an air pressure wave moving at or slightly faster than the speed of sound, an increased air pressure travelling at substantially less than the speed of sound, water pressure wave, ground pressure wave, heat, visible light, or invisible electromagnetic forces).

6. "In claim 6 "the target" has no antecedant basis in the claims." Applicant requests change to "a target."

7. "In claim 7 "bouncing or rhythmic sequence" is vague and indefinite as to the particular process limits implied by this term as well as being alternative." Applicant requests examiner to write seperate claims of Bouncing Procedure and Resonance Procedure as defined in General Remarks.

8. "In claim 8 the limits of "to dig out and expose" is vague and indefinite." Claim 8, of course, is niether synchronous or synchronous by vector, nor is it aimed at the target itself since it is designed to remove the overburden between the target and the next stage of attack. Applicant requests change to "to expose a buried target in the following manner; STFP bombs are applied in two or more sets in relation to a buried target, the first set being applied into the overburden above said target and the second set being applied above and to a

side above said overburden above the target at approximately ground level, Set A detonating first, moving overburden upwards, Set B detonating shortly thereafter, moving overburden to a side above the target." As with all other claims applicant requests examiner's help in writing the broadest possible successful claim.

9. "In claim 9 "in a synergetic way" is vague and indefinite and fails to make clear the limits of the claim." Applicant requests claim to read "The process defined in claim 3, wherein explosive and incendiary bombs are employed together."

10. "In claim 12 "chemical or biological attacks" is alternative and indefinite. In claim 12, "enhanced or attenuated" is alternative and indefinite." Applicant requests examiner to write separate claims for "chemical" and "biological" as well as "enhanced" and "attenuated."

11. "In claim 13 "the larger blast area" has no basis in the claims." Applicant requests change to "another blast area" or as examiner sees fit to best cover this claim.

12. "In claim 14, electromagnetic or electromagnetic and percussion fuses" is alternative and indefinite. In claim 14 "the electromagnetic signal or signals has no antecedant basis in the claims and is alternative. In claim 14 "synchronous or synergetic event is alternative and synergetic event is unclear as to the limits of the claimed process. Also

claim 14 is indefinite because there is no period dot to end the sentence so it is not clear that the claim is complete. Applicant requests examiner to write claim as "electromagnetic fuses." and "electromagnetic signals." Applicant requests separate claims for synchronous and synergetic. As in 4 above, applicant requests examiner to write the synergetic claims to cover Drill and Wipe Procedure, Bouncing Procedure, Resonance Procedure, Expanding Fields Collapsing Fields, Simultaneous By Vector situations not covered by Stiennon and defilade by STFP, all the above covered under general remarks, specific remarks or original patent application. Applicant requests examiner to write claim with correct period dot.

13. " Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Stiennon (4,359,944). Stiennon discloses a plurality of ordnance "method of delivery." Applicant feels Stiennon discloses what applicant describes as Simultaneous and Simultaneous By Vector processes and these only in a very limited way. The Simultaneous is limited by being an unintelligent one sided hit without the subtle yet powerful nuances afforded by applicants approach-e.g. by placing the focus of the STFP ordnance aggregated into shaped charge formations onto the corners of a target-as the example on page 2, General Remarks, one can spin the target clockwise or counterclockwise, depending on which corners one chose to focus the energy on -or if one took this same target

and put two shaped charge STFP aggregates on each northern corner, facing southward and one shaped charge STFP aggregate on the southern center, facing northwards a slicing or pincers manipulation of the forces could be accomplished. This is beyond Stiennon or earlier art. Furthermore Stiennon does not target chemical agents, biological agents or the breathability of the atmosphere. Stiennon's simultaneous detonation is further limited by; it is "to destroy aerial targets", it is "a fixed defensive weapon", it utilizes an air pressure wave that "travels at the speed of sound or slightly in excess thereof", it requires a "rigid surface", and it requires an interface of a "blasting machine alone, or a blasting machine in connection with time delay blasting caps or delays attached to detonating cord.", nor does it provide a defilade option. Stiennon's Simultaneous By Vector is also limited in the above ways. Note that in Bouncing Procedure and in Resonance Procedure the rhythmic sequence is not simultaneous or simultaneous by vector-that is the energies do not arrive at the target at the same time. Stiennon's simultaneous by vector approach does not cover the defilade available in applicant's Rolling Technique nor does it take into account enhanced pressures available through expanding and collapsing fields. Stiennon indicates no method of delivery other than perhaps what applicant would categorize as manual placement-it is not envisioned as an artillery

missile, aircraft, torpedo or depth charge placement of the ordnance, further the ordnance would have to be connected by electric wire or blasting cord to the blasting machine-not a very nice job if one were operating in hostile territory.

14. "6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stiennon (4,359,944) in view of Schroeder (3,951,066)obvious to one having ordinary skill in the art." Applicant feels if it was obvious than it would be implemented, this lack of implementation, along with a multiplicity of steps, multiplicity of references, references take different approaches and synergism-as defined by USPTO, give validity to the claim.

15. " Claim 10 is rejected under 35 USC 103(a) over Stiennon (4,359,944) in view of Turchi(5,835,545) electro-magnetic pulse ordnance is considered to have been obvious to one having ordinary skill in the art."Applicant feels if it was obvious it would have been implemented. This lack of implementation,along with a multiplicity of steps, multiplicity of references,references take different approaches and synergism give validity to this claim.

16. "8. Claim 11 is rejected under USC 103 (a) as being unpatentable over Stiennon (4,359,944) in view of Chawla (4,627,353) obvious to one having ordinary skill in

the art." Applicant feels if it was obvious than it would be implemented, this lack of implementation, along with a muti-plicity of steps, multiplicity of references, references take different approaches, and synergism give validity to this claim.

17. "9. Claim 14 is rejected under 35 USC 103(a) as being unpatentable over Stiennon (4,359,944) in view of Kurschner et al(5,497,704) ordinary skill in the art." Applicant feels if it was obvious than it would be implemented. This lack of implementation, along with a multiplicity of steps a multiplicity of references, references take different approaches, and synergism give validity to this claim.

18. "10. Claims 8,12 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 USC 112, second paragraph, set forth in this office action and to include all of the limits of the base claim and any intervening claims." Applicant requests examiner to write 8,12 and 13 as well as base claim and any intervening claims.

Conditional Request For Constructive Assistance

Under MPEP 707.07(j) applicant requests examiner to write claims and subclaims for STFP in as broad of terms possible.


Conclusion

Applicant submits that the claims-with acknowledgement to very limited Simultaneous and Simultaneous By Vector processes of earlier art-define patentably over the prior art.

Appn#10 '643,373 (Holloway) AU3644 16of16

Thanks to the examiner,

Respectfully,


Craig Holloway

Applicant

20 June 2005

115 Fifth St.

Glenwood Springs, CO 81601

(970) 309-8281